

Instrument Transformers & Bushings





DC polarity reversal test with PD on 500 kV wall bushing.

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Instrument transformers and bushings are critical components of the electrical system. Validating their performance through high voltage and high current testing is important for assuring system reliability. Testing instrument transformers also confirms the accuracy required for revenue metering, system protection, and control requirements.

Manitoba Hydro International Ltd. offers electrical tests on an array of different instrument transformers and bushing equipment types, including:

- Inductive Voltage Transformers (IVT);
- Capacitive Voltage Transformers (CVT);
- Current Transformers (CT);
- HVDC Voltage Dividers;
- HVAC/HVDC Transformer Bushings;
- HVDC Wall Bushings.



Lightning impulse withstand test on a 230 kV AC transformer bushing.

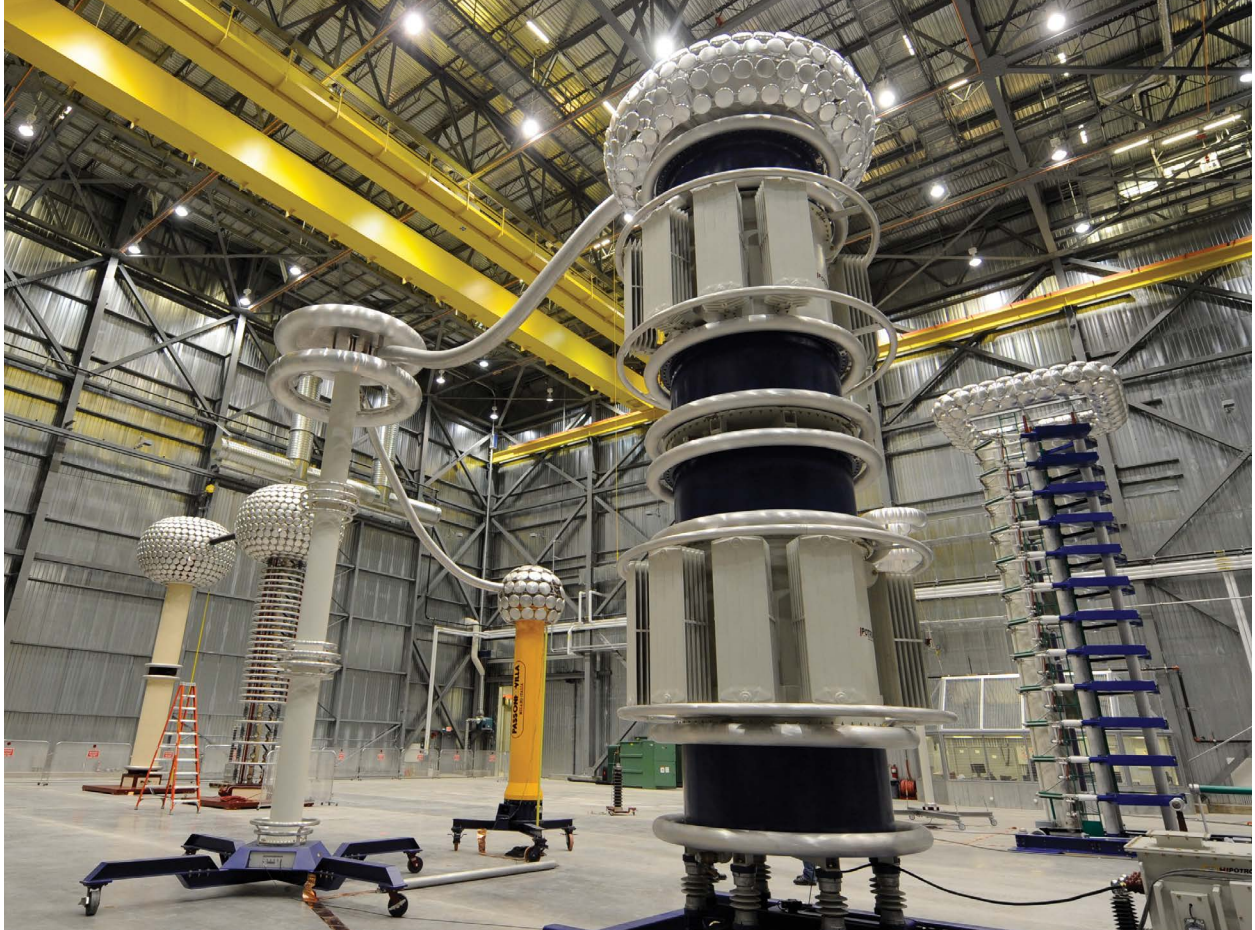
Standards

We offer instrument transformer and bushing tests compliant with the following standards:

- **IEC/IEEE 65700-19-03** – Bushings for DC application;
- **CAN/CSA-C88.1-96 (R2015)** – Power Transformer and Reactor Bushings;
- **C57.19.00** – IEEE Standard General Requirements and Test Procedure for Power Apparatus Bushings;
- **C57.13** – IEEE Standard Requirements for Instrument Transformers.

Test Capabilities for Instrument Transformers & Bushings

Capabilities	Rating
50/60 Hz Voltage (AC)	800 kV
Direct Voltage with Polarity Reversal (DC)	± 1,200 kV
Switching Impulse	± 1,300 kV
Lightning Impulse	± 2,400 kV
60 Hz High Current Injection (Temperature Rise and Accuracy)	5,000 A



High Voltage Test Services

In partnership with Manitoba Hydro's High Voltage Test Facility, we provide commercial testing services for a wide variety of high voltage electrical equipment. All testing is performed at Manitoba Hydro's leading-edge facility, where services are tailored to meet each customer's specialized needs in accordance with IEEE, ANSI, IEC, and CSA standards.

Contact us today to discuss your testing requirements:

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Available in accessible formats upon request.

